



State of Montana
Fish, Wildlife & Parks (FWP)

2012 Agency Biennial IT Report
Fiscal Year 2011-2012

August 2012

TABLE OF CONTENTS

EXECUTIVE SUMMARY1

SECTION 1: AGENCY IT PLAN ACCOMPLISHMENTS – GOALS & OBJECTIVES2

SECTION 2: IT INITIATIVES STATUS UPDATES.....8

SECTION 3: ADDITIONAL INFORMATION - OPTIONAL10

EXECUTIVE SUMMARY

As in previous reporting periods, FWP technology has pragmatically and continuously moved the agency forward. Several key areas include:

- During this reporting period, with the cooperation of SITSD staff, FWP efficiently moved its primary technological infrastructure to the state's new data center with substantially less than 1 day of downtime.
- All stated objectives were either met, or had progress made, while a multitude of mandated and/or unanticipated tasks were blended in.
- New services offer specific customers, and the public, better access to agency information, services and proceedings.
- Several cooperative and successful efforts helped related business between agencies proceed more effectively.
- Statewide FWP program coordination improved through use of new technologies and cooperative agreements.
- The wealth of data and information collected by FWP staff increasingly finds secure and recoverable resting places, with tremendous improvements in data integrity.
- The manner in which FWP approaches technology projects continues to result in successful projects and solutions, with program staff and technology staff establishing effective team relationships.
- Increasing focus and use of leading edge technologies provides for cost savings and more effective operations.

FWP continues to look for manners in which to provide the best technological services possible, to internal and external customers, at the absolute best price. Sometimes this means thinking out of the box, or resisting the status quo.

While FWP's initiatives did not meet stated reporting requirements, each was felt important enough to list, and was for the most part accomplished. The majority required redirection of base operations, and/or occupied existing staff time. The one initiative listed below as funded, was simply a redirection of operations to personal services resulting in no net increase to the technology budget.

Initiative counts are as follows:

Initiative Status	Total	Fully Funded	Unfunded	Partially Funded
Completed	5	1	4	0
Substantially Completed	1	0	1	0
Deferred	0	0	0	0
Delayed	0	0	0	0
Cancelled	0	0	0	0
Remain on-going by design	0	0	0	0

SECTION 1: AGENCY IT PLAN ACCOMPLISHMENTS – GOALS & OBJECTIVES

Goal Number 1:

IT Goal 1 Communicate and participate in collaborative efforts with stakeholders

Description: FWP Technology Services Bureau (TSB) staff will communicate and collaborate with stakeholders, and other agencies, to provide effective training, user documentation, service information, and other types of technical efforts to achieve cooperative and effective solutions.

Benefits:

- More comprehensive solutions
- Better informed and trained stakeholders
- Effective use of technology services, especially when coordinating across the state enterprise
- Clearer understanding of user needs and requirements
- Clearer understanding of technology and it's applications and limitations, and why IT policies make sense to the organization
- Cost reductions in associated and appropriate areas
- Ability to take advantage of enterprise, regional or national successes

Which state strategic goal(s) and/or objective(s) does your goal address?

This goal will help to more effectively address all state strategic goals 1, 2, 3 and 4.

Supporting Objective/Action

Objective 1-1 Provide the necessary training and technical support to FWP staff to provide confidence and satisfaction, thus increasing use of FWP's new video conferencing solution.

Accomplishments: FWP Network Services staff upgraded all Video Conferencing site circuits to the standard 3mg MPLS type with QOS enabled. These upgrades, coupled with streamlined instructions and additional training, have resulted in increasing comfort and use of the video conferencing equipment, thereby providing increased productivity through more effective communications across the state, and savings to travel expenses for the department. Alternative methods to accurately predict actual savings are being considered and developed.

Status: Completed

Supporting Objective/Action

Objective 1-2 Establish "system champions" for each FWP business information application/system. Train system champions ("train the trainer") to provide the necessary training and first level support for other staff within the affected program unit.

Accomplishments: Starting in September 2010, FWP Application Development staff adopted use Agile software development methodology using the Scrum framework for application development. Scrum allows for close stakeholder synergy through the "product owner" role, facilitates delivery of working software at the end of development iteration (called a "sprint"), and promotes an "inspect and adapt" mentality. The process has proven extremely effective toward realizing many of the benefits outlined in this Goal. All new software development projects now have a dedicated "product owner" (aka "system champion") designated at the start of the project.

Status: Ongoing use of Scrum as FWP's software development framework for new projects approved and

prioritized by the FWP IT governance committee.

Supporting Objective/Action

Objective 1-3 **Identify areas that include a community of interest and explore ways to leverage shared efficiencies and supportability.**

Accomplishments: In April 2011, members of FWP's IT staff and state veterinarians in the FWP Bozeman Lab and the Department of Livestock Lab first met to explore the feasibility of an automated interface between the two labs, increasing efficiencies and reducing potential errors typically caused through manual data entry efforts. Analysis work on that effort is expected to begin in January 2013, depending upon availability of both FWP and Livestock lab staff. 0% complete.

FWP and DPHHS entered into an agreement in the fall of 2010 that resulted in the information sharing between the death registry and FWP's Automated Licensing System (ALS). A monthly process was set up to match deceased person records against ALS and flag appropriate matches. 100% complete.

FWP signed an MOA with the Department of Justice to cooperatively share SmartCop technology. That project's pilot phase was completed and full program implementation is a part of FWP's FY12 IT Strategic Plan. Pilot 100% complete.

FWP and the Department of Commerce signed an MOU for the development of web content templates for FWP Parks' new website at stateparks.mt.gov. The templates have all been delivered. The new site is now in production. 100% complete.

Status: Substantially Completed

Goal Number 2:

IT Goal 2 **Provide effective technology services**

Description: Timely and effective application development and support, and technology delivery to customers. Special emphasis is to be placed on "customer service".

Benefits:

- Increased system efficiency
- Decision support services delivered
- Reduced administrative overhead
- Satisfied customers
- State-of-the-art technologies are available for FWP staff use
- Lower overall technology related costs

Which state strategic goal(s) and/or objective(s) does your goal address?

This goal will help to more effectively and directly address state strategic goals 1, 2 and 4.

Supporting Objective/Action

Objective 2-1 **Develop and implement a pilot program providing for the integration and use of the DOJ SmartCop system for FWP Law Enforcement vehicle operations.**

Accomplishments: FWP successfully completed a small, limited pilot with two officers using equipment and test software to verify the usability and applicability of the SmartCop program for FWP. At the conclusion of that pilot, FWP Law Enforcement decided to move forward with full participation in this project. A MOA has been established and signed between the two agencies detailing responsibilities and understanding. Equipment and licenses to outfit and install 23 units for FWP Game Wardens have been

purchased and are expected to be installed and operational in FY13.

Status: Completed

Supporting Objective/Action

Objective 2-2 Develop and implement a public web application that allows the public to search and listen to specific Commission meeting topics.

Accomplishments: A new web based application was implemented that enables authorized FWP staff to create Commission Meeting Agendas, automatically post agendas to FWP's website, keep a history of Commission agendas and meeting minutes, and attach FWP Commission meetings audio clips to agenda topics and make those audio clips available to the public through FWP's website. This project significantly improved the timeliness of associated business processes and provided citizens with better accessibility to Commission meeting topics of interest to them.

Status: Completed

Supporting Objective/Action

Objective 2-3 Stay abreast of emerging technologies through research and development in order to best serve FWP stakeholders.

Accomplishments: FWP Application Development staff adopted several new technologies in FY11 that have greatly contributed to our ability to deliver applications with a higher degree of usability (ease of use). These include JQuery grids and Java Struts.

FWP Network Services staff continue to explore new methods and technologies to more effectively and efficiently deliver higher quality services. Areas currently being considered for deployment at FWP include virtual desktops and utilizing cloud computing services.

Status: On-going

Supporting Objective/Action

Objective 2-4 Provide a cost-effective Technological infrastructure that will facilitate the consolidation of appropriate FWP technology services.

Accomplishments: FWP has aggressively continued its virtualization efforts to reduce costs and administrative overhead while still providing high quality infrastructure services to its customers. Currently, 100% of implementations eligible for collapse to a virtual infrastructure have been completed with FWP's move into the new data center in December 2011.

Status: Completed

Goal Number 3:

IT Goal 3 Stable, secure and recoverable systems

Description: FWP applications and systems remain operational, free from compromise and can be recovered according to operational business requirements.

Benefits:

- FWP business continuity
- Stakeholder confidence
- Sensitive data protected
- Individual privacy safeguarded
- Appropriate and timely information provided to decision makers

Which state strategic goal(s) and/or objective(s) does your goal address?

Stable, secure and recoverable systems are at the very heart of protecting individual privacy and privacy of information. Stability and recoverability leads to improved government services in availability and uptime. Achievement of this goal will help to address state goals 1, 2 and 4.

Supporting Objective/Action

Objective 3-1 Implement Disaster Recovery Scenario Exercises

Accomplishments: FWP continues to work on and refine its Disaster Recovery and Business Continuity plans. These efforts, coupled with significant fault tolerance in the FWP infrastructure, ensure that FWP systems continue to enjoy a 97%+ uptime factor. Enhancements to backup technologies (disk vs. tape) have helped ensure recoverability while not impacting production operations.

Initial exercises for ALS have been identified and performed as of December 2010. Additional exercises and drills will be developed and conducted over time as FWP's Security and Disaster Recovery Programs move toward maturity.

Status: On-going

Supporting Objective/Action

Objective 3-2 Transition the last of FWP's Oracle 6i forms/reports to Oracle 10g

Accomplishments: All of FWP's legacy Oracle 6i forms and reports were successfully converted to Oracle 10g version as of November 2010.

Status: Completed

Supporting Objective/Action

Objective 3-3 Transition all applications from the SQL Server database platform over to the Oracle database platform.

Accomplishments: All of FWP-hosted SQLServer databases were converted to the Oracle RDBMS as of December 2010.

Status: Completed

Goal Number 4:

IT Goal 4 Workforce recruitment, development, and retention

Description: With effective recruitment, development and retention practices, skilled technology staff are more easily recruited, existing staff have opportunities for additional training, progression within existing positions and career growth, and employee turnover is minimized. As outlined in the Agency's Goal A, the work environment should have clear priorities, the decision-making process should be efficient and effective; and a result is employees feel a sense of accountability, value and satisfaction in their achievements and their contributions to the agency's mission.

Benefits:

- Employees can perform challenging and meaningful work
- Opportunities for career growth, learning, and development are maximized
- Employees are recognized, valued, and respected for the contributions they make
- Employees are compensated fairly for the work they do
- Lower employee turnover/increased retention
- Critical business areas have cross-trained support

Which state strategic goal(s) and/or objective(s) does your goal address?

This goal directly addresses state goal 3, although an additional product of this strategic goal is a quality employee who will further the other three state strategic goals.

Supporting Objective/Action

Objective 4-1 **Successfully approach the 2011 legislature in making permanent the positions approved at the 2009 legislative session.**

Accomplishments: This objective was successfully completed within the 2011 legislative session. One-time-only (OTO) positions were approved as permanent FTE.

Status: Completed

Supporting Objective/Action

Objective 4-2 **Make full use of FWP's employee award programs, and identify other creative options to enhance employee morale and retention efforts.**

Accomplishments: SMART awards are used whenever possible as one means to thank employees for their outstanding work efforts, either individually or as a team, related to specific projects or work efforts they are involved with. Ideas for possible options to enhance employee recognition and build employee morale continue to be discussed.

Status: On-going

Supporting Objective/Action

Objective 4-3 **Enhance and improve the flexibility of FWP recruitment processes for technology positions.**

Accomplishments: FWP Application Development Unit's Computer Software Engineer recruitment postings were revised to "market" the agency and the position. We have had good applicant pools, with several applicants expressing their interest in the agency because "It sounds like a great place to work".

Status: On-going

Supporting Objective/Action

Objective 4-4 **Develop and maintain a team of FWP IT employees with the knowledge and skills to meet the information services needs of FWP.**

Accomplishments: Technology Services invests in the training of its staff to develop the knowledge and skills necessary to provide high quality IT services to our customers. Training budgets are heavily used toward this end. FWP Technology Services staff continues, for the most part, to be retained with minimal turnover. More time and thought needs to be put into this objective, however, as low state salaries will likely cause staff to "shop around" over upcoming years.

Status: On-going

Goal Number 5:

IT Goal 5 Develop and implement standardized practices and procedures

Description: FWP TSB will develop and implement standardized technology practices and procedures by researching industry accepted "best practices", and selecting and documenting those standards applicable to FWP technology services.

Benefits:

- Consistent practices and procedures
- Clear decision-making
- Efficient and effective use of IT and other staff resources
- Accountability

- Improved government services
- Positive ROI
- Greater Customer Satisfaction
- Project Risk Mitigation

Which state strategic goal(s) and/or objective(s) does your goal address?

Development and adherence to standard practices and procedures will lead to organized, deliberate and cost effective IT resource development, and ultimately improved and more secure government services. This goal most closely helps to address state goals 2 and 4.

Supporting Objective/Action

Objective 5-1 Codify internal standard operating procedures for systems management

Accomplishments: FWP’s web team consistently practices code reviews. Other FWP Application Development staff are in the process of adopting periodic and on-going code reviews, database design reviews, and other procedural reviews to improve and further secure systems management.

Status: On-going

Supporting Objective/Action

Objective 5-2 Use appropriate project management methodologies and practices

Accomplishments: FWP’s Technology Services Bureau (TSB) has a voting member on the State Project Management Office’s Advisory Group (PMOAG).

TSB reorganized in January 2012 to better align its operational and project management objectives. As a result, a new Project and Program Alignment Section and a consolidated Technology Operations Section now exist. The Project and Program Alignment Section has responsibility for project management, business analysis, quality assurance, and the agency’s security program.

FWP’s Application Development staff adopted and implemented the Agile Scrum framework as its development methodology, effective September 2010. FWP has enjoyed a high degree of success to-date with this process. The emphasis on continuous planning and teamwork, coupled with more rapid development of highest business value products first, is allowing FWP IT to “hit home runs” with its software development products.

Status: On-going

SECTION 2: IT INITIATIVES STATUS UPDATES

Initiative 1 Permanent positions

Description: In 2009, the legislature approved technology positions within FWP. However, as with the majority of FWP's budget, they were categorized as one-time-only (OTO). The needs for the resources have not gone away, and in fact have grown. It is important to retain these positions as permanent to help meet demand for services, and allow achievement the initial objective, which were cost effective reductions in contracted services.

EPP Number:

Status: Completed successfully at the 2011 legislative session

Funding: Funded

Initiative 2 Video Conferencing Assimilation

Description: FWP recently completed installation of a video conferencing system at its HQ and regional offices. With budgetary constraints and possibly hazardous travel conditions, video conferencing is a mechanism that can provide travel savings, increase participation at appropriate FWP meetings, and provide safer circumstances for employees or customers with a need to participate in specific FWP meetings. Employees must have confidence in the video system, and its scheduling and use to most effectively utilize the technology. As a part of this initiative, TSB staff intend to ensure that all links to FWP core facilities are of sufficient size and quality to support agency data and video needs.

EPP Number: N/A

Status: Completed March 2011. All circuits were upgraded and QOS enabled, resulting in a much higher quality video experience for FWP users. Use of the video conferencing system is continuously increasing.

Funding: Not Funded

Initiative 3 Fisheries & Wildlife Information System

Description: FWP's Fish & Wildlife Division has identified the need to centralize the field data (aka survey and inventory data) that is collected by regional biologists, as well as tie together the survey and inventory data to harvest data that is already centralized. This project has been ranked as TSB's top development priority by agency management. This work will be accomplished using existing TSB resources.

EPP Number: N/A

Status: Completed April 2012. The final functionality for the core system was implemented in April 2012. The system has officially entered the "ongoing maintenance and support" phase of its lifecycle.

Funding: Not Funded

Initiative 4 Parks Reservation System

Description: FWP's Parks Division is working on a cooperative agreement with a neighboring state (ID) for an e-government service to offer online reservations for Park visitors. The model being pursued would provide the system to Montana at no cost to FWP. TSB staff is anticipated to provide support services to ensure Montana's Parks Division needs are met.

EPP Number: N/A

Status: Completed May 2011. An agreement was secured with Idaho state parks. Nineteen (19) state parks in Montana participated in the program its first year. FWP Network Services staff provided acquisition, installation, and support services for the required infrastructure.

Funding: Not Funded

Initiative 5 SQL Server/MySQL Retirement

Description: This initiative will finalize consolidation of FWP RDBMS services onto the Oracle platform. This will reduce costs in hardware, software, and database and systems engineer support.

EPP Number: N/A

Status: Substantially Completed (90%). SQL Server retirement accomplished December 2010. FWP's Mandatory Reporting Response Entry (MRRE) application was migrated from the MySQL platform to the Oracle RDBMS in September 2010. Two remaining systems still "live" on the MySQL RDBMS. One of those systems will be deprecated and the other moved off MySQL in FY13.

Funding: Not Funded

Initiative 6 FWP Server Virtualization

Description: FWP will continue the process of virtualizing server platforms to consolidate hardware and take advantage of underutilized server implementations.

EPP Number: N/A

Status: Completed December 2011

Funding: Not Funded

SECTION 3: ADDITIONAL INFORMATION - OPTIONAL

Other types of information that your agency may wish to report as accomplishments or challenges related to achieving the Goals, Objectives, and Initiatives outlined in your 2010 IT plan and 2011 IT plan update.